

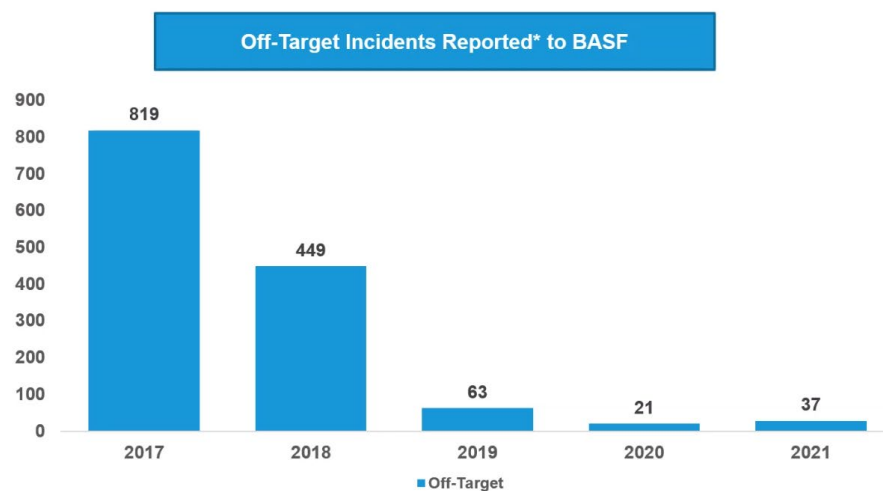
9.30.2021 BASF EPA Dicamba Meeting

BASF: John Sedivy, Jeff Birk, Timothy Mahl

EPA: Top Feedback and Takeaways from the 2021 use season involving dicamba on DT cotton and soybeans based on WSSA, AAPCO, and SFIREG meetings

BASF (John): Want to share interactions from the states to provide to EPA and ask some questions.

BASF(Tim): Some concern between the new registration label and what EPA expectations were, though it seems less dire to BASF based on their discussions.

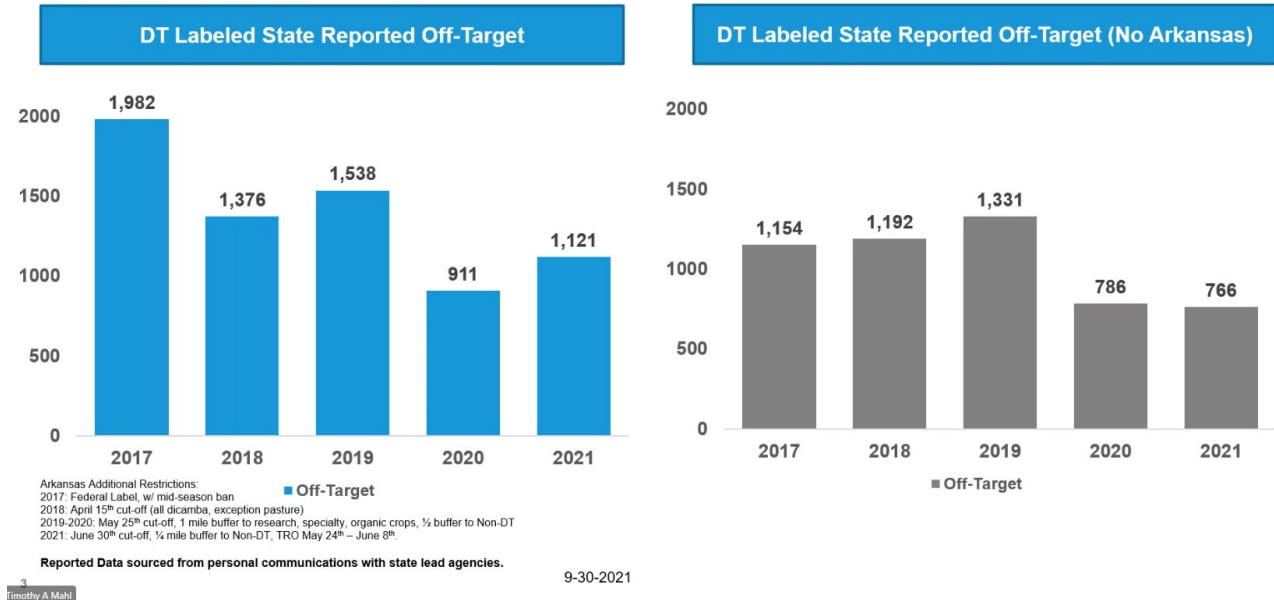


*Incident reports received as of 09-20-2021.

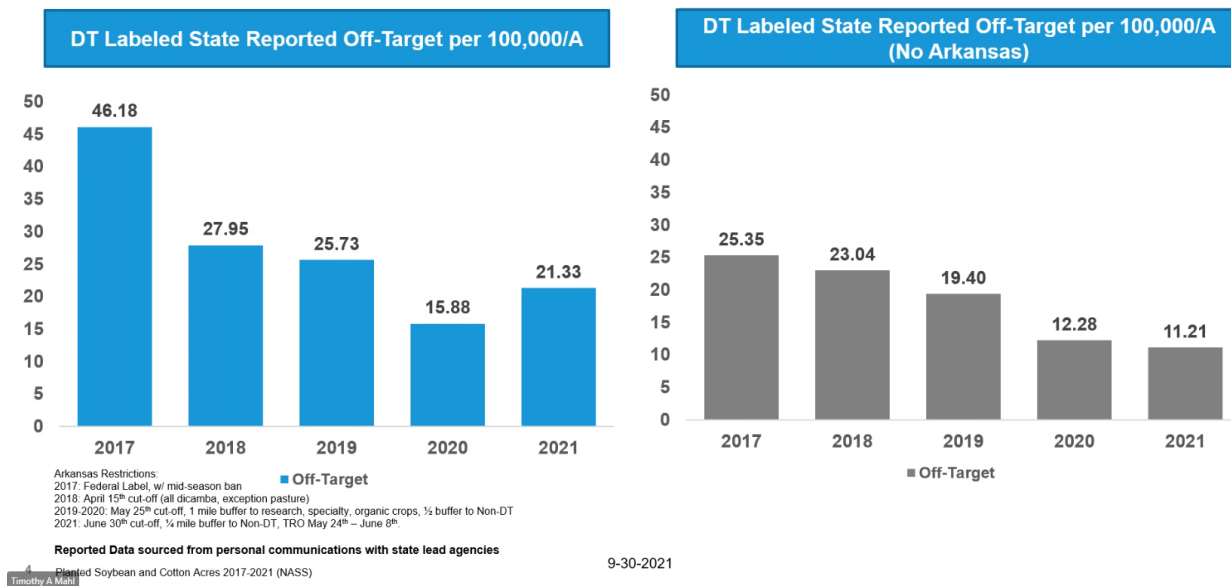
BASF reports all off target incidents received.

9-30-2021

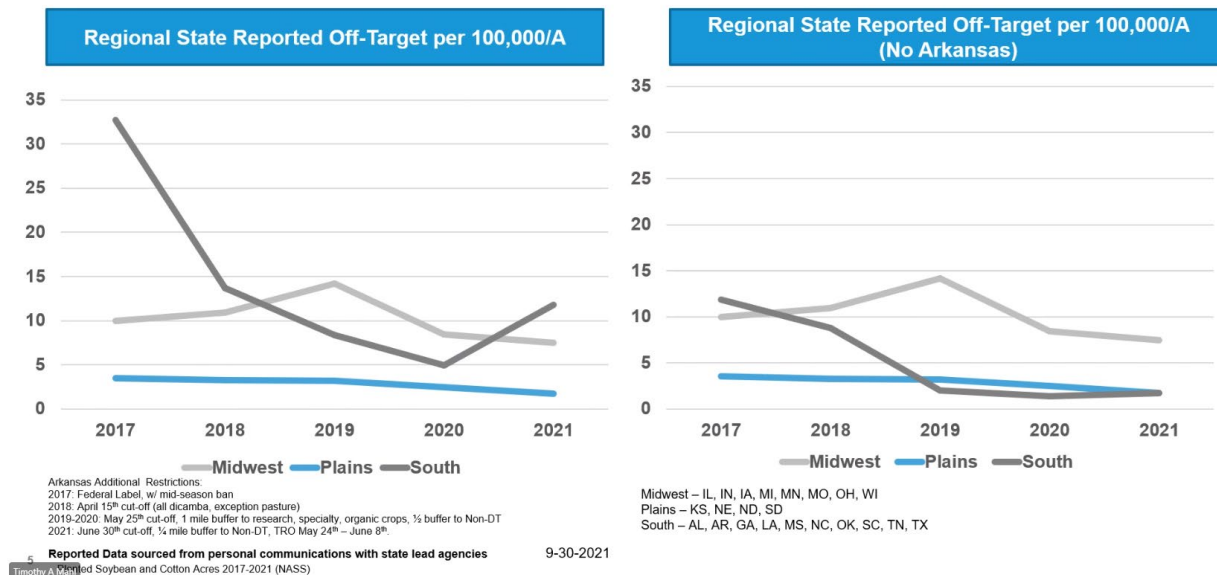
BASF: Reporting has consistently gone down. 2017 (first OTT year) was a very difficult year for everyone. 37 reported this year though not all specifically associated with Engenia – report all dicamba incidents. 2020 is not as representative due to vacatur, so they compare to 2019 and show a decrease in 2021 from then.



BASF: Arkansas self-polices the use of dicamba (in season bans, early season cut offs 19 and 20, mile buffers, in 2021 they had a restraining order from may 24-june 28, so its very inconsistent year to year. If you remove Arkansas, there is a significant decrease from year to year. See incidents cut in half from 2019 to 2021. Arkansas accounted for 35% of complaints from this past year; given all their political and legal challenges, needed to remove to see the trends



BASF: Based on 100,000 acres, significant decrease from 2019 to 2021. These are the same state reported data per 100,000. This is total planted DT soybean and cotton acres, not total treated by Engenia



BASF: This is breaking out state values into regions. Midwest: IL, IN, IA, MI, MN, MO, OH, WI. Plains: KS, NE, ND, SD. South: AL, AR, GA, LA, MS, NC, OK, SC, N, TX. Y axis = #/100000A. USDA NASS database for soybean acreage – DT acreage, not all soybean planted acres

Still work to be done in the midwest, but otherwise trending down. Some areas require additional mitigation or modification and some areas are acceptable. Significant portion of the country doing well or better than well. Several states want to expand the dates and use (24c), some want to push the uses earlier, so theres some regional differences.

EPA: Do you know if there is a relative difference in the acres treated with engenia vs total soy and cotton among the regions?

BASF: The density of dicamba use of DT crops is highest in the south and then decreases as you move north due to presence of resistant weeds. Sw ramp up in first 3 years of DT use then stabilized in 2020 and then will trend somewhat downward because we believe the technology has peaked in usefulness.

EPA: What is the variance within each region? Are these meaningful differences given the averaging across so many factors (e.g., differences in reporting, differences in actual incidents, etc.. This looks like an average for each region each year. Whats the variance within each region? Some states have none reported and then some have lots.

BASF: This is all data from the states, so it's the best data that we have. We haven't gone into the statistics of the reporting because there's so much that goes into that. We do have the individual numbers for each state but could do the breakdown of that. We don't have that right now though. I would guess its large.

EPA: Is the information shown here part of the response letter you're working on?

BASF: Farmers often send official inquiries to state rather than to BASF because of the timeline and needing record for insurance. We can provide technical expertise in some cases to people who misuse and need assistance and that does happen but is not common. We have already submitted the presentation up to this point previously and will send again.

Timing of Dicamba Related Calls to Midwestern¹ State Lead Agencies, 2021

- calls to Midwestern SLAs spanned from late June to early August *
- majority of calls made from mid- to late July *

¹ ND, SD, MN, OH, IL, IN, IA, MI, WI, MO, KS, NE

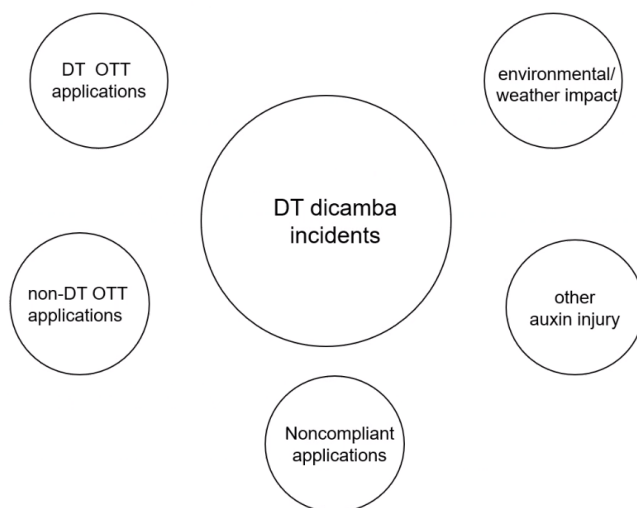
* Personal communications between BASF and SLAs

9-30-2021

Timothy A Mahl

BASF: Given couple week lag for symptomology, looks like incidents are occurring from late June applications. Important when considering key parameters

Sources of DT soybean and cotton incidents



9-30-2021

Timothy A Mahl

BASF
We create chemistry

BASF: Not a deflection, obvious DT OTT applications are driving the core of these, but there are likely other sources that also contribute to the incidents. Some reports just say “auxin” because they couldn’t find an engenia field nearby. Dicamba is the target in the room and DT OTT are a component but we believe some other applications are being lumped in as well.

EPA: Do you see late season applications to corn as an issue?

BASF: That is a possible contributor but we consider that with non DT OTT applications. We ill include incidents associated with OTT corn from 2002 to now. We encourage you to reach out to the states for the same information. There is a significant change once DT technology is introduced into market. The use pattern hasn’t changed significantly in corn and the baseline is very low. This will be submitted as part of 6a2 response Oct 1.

Beneficial steps to take: application timing

Incidents associated with later in application window in midwest areas and that’s driving thought process

BASF working on regional approach and pushing to move applications to earlier in the season. Need a window of OTT for system to work but do think that earlier applications are critical

EPA: What do you think is the functional window of time for OTT applications?

BASF: We’re still discussing that. Need at least an early post emergence application after weeds have emerged. Pigweed can emerge throughout the season, so growers are waiting as long as they can to kill that. Midwest is a tough region for when that would be. Southern states have a better experience because they don’t have a compressed schedule like the northern states with later planting date and cooler weather so slower growth. The challenge is the later planting. Soybean growers are competing with corn growers for dicamba applicators.

EPA: Oct 7 senior EPA leadership briefing, so knowing what you’re willing to put forward is really helpful. Any specific proposals you’re willing to put on the table is helpful.

EPA: How many ESA counties had incidents?

BASF: We do not know because we do not have county level data from the states. Did not cross reference their own complaints (37 total) with ESA counties. Wouldn’t be meaningful data given small number and only in 5 states (Iowa, IL, Kansas, Missouri, missed last state).

EPA: It would be helpful to know if any of those were in ESA counties.

EPA: Could you speak to what kind of noncompliance you’re seeing

BASF: It’s speculation. We don’t have any specific information. Yield penalty vs spraying in nonideal circumstances. We don’t think 100% compliance is reasonable with any product so we just bring mention it.

BASF (Tim): Can we speak about why the label is difficult to comply with? Most things are done before application. Where is the complexity from?

EPA: The issue is the environmental conditions. In some areas if you map out when are compliant conditions, they're very limited. Reports of record keeping violations as well.

BASF: Vast majority of states want to use product more liberally but there are some states where we can do better and need to avoid those late June applications.